

AMENDMENTS TO THE CLAIMS

Claims 1-9 (canceled).

Claim 10 (Currently Amended) A differential pressure sensor for measuring the pressure difference between a pressure acting on a high-pressure side and a pressure acting on a low-pressure side, comprising:

A measuring mechanism having:

a chamber on the high-pressure side that is sealed by a first dividing membrane and filled with a transfer medium, said first dividing membrane is loaded with a pressure acting on the high-pressure side;

a chamber on the low-pressure side that is sealed by a second dividing membrane and filled with a transfer medium, said second dividing membrane is loaded with a pressure acting on the low-pressure side;

a pressure-sensitive element which separates said chamber on the high-pressure side from said chamber on the low-pressure side; and

a single throttle for damping overload pulses; wherein:

said throttle is arranged on the low pressure side between said pressure-sensitive element and said second dividing membrane; and

no throttle is arranged on the high pressure side.

Claim 11 (Previously presented) The differential pressure sensor as claimed in claim 10, wherein:

said transfer medium is a hydraulic liquid, especially a silicone oil.

Claim 12 (Previously presented) The differential pressure sensor as claimed in claim 10, wherein:

said pressure-sensitive element has a measuring membrane, especially a piezoresistive silicon chip with a measuring membrane.

Serial No. 10/722,566

Claim 13 (Previously presented) The differential pressure sensor as claimed in claim 10, wherein:

said throttle has a sintered body.

Claim 14 (Previously presented) The differential pressure sensor as claimed in claim 13, wherein;

said sintered body is a metallic or a ceramic sintered body.

Claim 15 (Previously presented) The differential pressure sensor as claimed in claim 10, wherein:

said throttle has a porous structure.

Claim 16 (Previously presented) The differential pressure sensor as claimed in claim 15, wherein;

said porous structure has an effective flow pore diameter of not less than 4 μm and not more than 28 μm , preferably between 8 μm and 16 μm .

Claim 17 (Previously presented) The differential pressure sensor as claimed in claim 15, wherein:

said the porous structure has a porosity between 15 vol.% and 50 vol.%, preferably between 25 vol% and 35 vol%.

Claim 18 (Previously presented) The differential pressure sensor as claimed in claim 13, wherein:

said sintered body has an essentially cylindrical form and the length of said sintered body in the axial direction is at least twice as large as the diameter.